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PATENT APPLICATION

JC17 Rec'd PCT/PTO 01 JUN 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Eiji SATO

Attn: PCT Branch

Application No. New U.S. National Stage of PCT/JP03/14949

Filed: June 1, 2005

Docket No.: 124137

For: VOLTAGE CONVERTING DEVICE, COMPUTER READABLE RECORDING
MEDIUM WITH PROGRAM RECORDED THEREON FOR CAUSING
COMPUTER TO EXECUTE FAILURE PROCESSING, AND FAILURE
PROCESSING METHOD

**TRANSLATION OF THE ANNEXES TO THE
INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached hereto is a translation of the annexes to the International Preliminary Examination Report (Form PCT/IPEA/409). The attached translated material replaces the material in the specification in pages 39 - 44.

Respectfully submitted,

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CLAIMS

1. (Amended) A voltage converting device comprising:
an electric load (M1, M2, G1) having an electric power generating
5 function;
a capacitor (C2) connected to an input of said electric load (M1, M2,
G1);
a down-converter (12) down-converting a voltage of said capacitor
(C2);
10 first control means (14, 31, 18) controlling an amount of electric
power generated by said electric load (M1, M2, G1); and
second control means (30, 30A, 30B) outputting to said first control
means (14, 31, 18) a command for instructing prohibition of electric power
generation in said electric load (M1, M2, G1) or for instructing decrease in
15 an amount of electric power generated by said electric load (M1, M2, G1),
when said down-converter (12) fails.
2. The voltage converting device according to claim 1, wherein
said down-converter (12) has a voltage-up-converting function.
- 20 3. (Amended) The voltage converting device according to claim 1 or
claim 2 wherein
said electric load (M1, M2) is a motor having an electric power
generating function,
25 said second control means (30, 30A, 30B) outputs to said first control
means (14, 31) a command for instructing restriction of a regenerative
electric power generating function of said motor when said down-converter
(12) fails, and
said first control means (14, 31) restricts an amount of regenerative
30 electric power generated by said motor based on said command.
4. (Amended) The voltage converting device according to claim 3,
wherein

said second control means (30, 30A, 30B) outputs to said first control means (14, 31) a command for instructing prohibition of regenerative electric power generation of said motor, and

5 said first control means (14, 31) controls said amount of regenerative electric power generated by said motor to zero based on said command.

5. (Amended) The voltage converting device according to claim 3, further comprising another electric load (M1) different from said motor, wherein

10 said second control means (30B) outputs to said first control means (31) a command for instructing restriction of said amount of regenerative electric power generated by said motor to a value smaller than power consumption in said another electric load (M1), and

15 said first control means (31) restricts said amount of regenerative electric power generated by said motor based on said command.

6. (Amended) A voltage converting device comprising:
a first electric load (G1, M2) having an electric power generating function;

20 a capacitor (C2) connected to an input of said first electric load (G1, M2);

a down-converter (12) down-converting a voltage of said capacitor (C2);

25 a second electric load (M1) that operates by receiving electric power generated by said first electric load (G1, M2);

first control means (14) controlling an amount of power consumption in said second electric load (M1); and

30 second control means (30A, 30B) outputting to said first control means (14) a command for instructing increase in an amount of power consumption in said second electric load (M1), when said down-converter (12) fails.

7. (Amended) The voltage converting device according to claim 6,

wherein

said second electric load (M1) is a motor,
said first control means (14) further controls torque of said motor,
said second control means (30A, 30B) outputs to said first control
5 means (14) a command for instructing said motor to output positive torque,
and

said first control means (14) controls the torque of said motor to a
positive value based on said command.

10 8. (Amended) A computer readable recording medium with a
program recorded thereon for causing a computer to execute failure
processing in a voltage converting device,

said voltage converting device including
an electric load (M1, M2, G1) having an electric power generating
15 function,

a capacitor (C2) connected to an input of said electric load (M1, M2,
G1), and

a down-converter (12) down-converting a voltage of said capacitor
(C2), wherein

20 said program causes the computer to execute
a first step of generating a command for instructing prohibition of
electric power generation in said electric load (M1, M2, G1) or for
instructing decrease in an amount of electric power generated by said
electric load (M1, M2, G1), when said down-converter (12) fails, and

25 a second step of controlling an amount of electric power generated by
said electric load (M1, M2, G1) based on the command generated in said
first step.

30 9. (Amended) The computer readable recording medium with a
program recorded thereon according to claim 8, wherein

said electric load (M1, M2) is a motor having an electric power
generating function, and

in said first step, a command for instructing restriction of a

regenerative electric power generating function of said motor is generated.

10. (Amended) The computer readable recording medium with a program recorded thereon according to claim 9, wherein

5 in said first step, a command for instructing prohibition of regenerative electric power generation of said motor is generated.

11. (Amended) The computer readable recording medium with a program recorded thereon according to claim 9, wherein

10 said voltage converting device further includes another electric load (M1) different from said electric load (M2, G1), and

15 in said first step of said program, a command for instructing restriction of an amount of regenerative electric power generated by said motor to a value smaller than power consumption in said another electric load (M1) is generated.

12. (Amended) A computer readable recording medium with a program recorded thereon for causing a computer to execute failure processing in a voltage converting device,

20 said voltage converting device including a first electric load (M2, G1) having an electric power generating function,

25 a capacitor (C2) connected to an input of said electric load (M2, G1), a down-converter (12) down-converting a voltage of said capacitor (C2), and

a second electric load (M1) that operates by receiving electric power generated by said first electric load (M2, G1), wherein

30 said program causes the computer to execute a first step of generating a command for instructing increase in an amount of power consumption in said second electric load (M1), when said down-converter (12) fails, and

a second step of controlling an amount of power consumption in said second electric load (M1), based on the command generated in said first

step.

13. (Amended) The computer readable recording medium with a program recorded thereon according to claim 12, wherein
5 said second electric load (M1) is a motor, and
 in said first step of said program, a command for instructing said motor to output positive torque is generated when said down-converter (12) fails, and
 in said second step, the torque of said motor is controlled to a positive
10 value based on the command generated in said first step.

14. (Amended) A failure processing method in a voltage converting device,
 said voltage converting device including
15 an electric load (M1, M2, G1) having an electric power generating function,
 a capacitor (C2) connected to an input of said electric load (M1, M2, G1), and
 a down-converter (12) down-converting a voltage of said capacitor
20 (C2),
 said failure processing method comprising:
 a first step of generating a command for instructing prohibition of electric power generation in said electric load (M1, M2, G1) or for instructing decrease in an amount of electric power generated by said
25 electric load (M1, M2, G1), when said down-converter (12) fails; and
 a second step of controlling an amount of electric power generated by said electric load (M1, M2, G1) based on the command generated in said first step.

30 15. (Amended) The failure processing method according to claim 14, wherein
 said electric load (M1, M2) is a motor having an electric power generating function, and

in said first step, a command for instructing restriction of a regenerative electric power generating function of said motor is generated.

16. (Amended) The failure processing method according to claim 15,
5 wherein

in said first step, a command for instructing prohibition of regenerative electric power generation of said motor is generated.

17. (Amended) The failure processing method according to claim 15,
10 wherein

said voltage converting device further includes another electric load (M1) different from said electric load (M2), and

in said first step of said failure processing method, a command for instructing restriction of an amount of regenerative electric power
15 generated by said motor to a value smaller than power consumption in said another electric load (M1) is generated.

18. (Amended) A failure processing method in a voltage converting device,
20

said voltage converting device including
a first electric load (M2, G1) having an electric power generating function,

a capacitor (C2) connected to an input of said electric load (M2, G1),
a down-converter (12) down-converting a voltage of said capacitor
25 (C2), and

a second electric load (M1) that operates by receiving electric power generated by said first electric load (M2, G1), wherein

said failure processing method comprising:
a first step of generating a command for instructing increase in an
30 amount of power consumption in said second electric load (M1), when said down-converter (12) fails; and

a second step of controlling an amount of power consumption in said second electric load (M1), based on the command generated in said first

step.

19. (Amended) The failure processing method according to claim 18,
wherein

- 5 said second electric load (M1) is a motor, and
 in said first step of said failure processing method, a command for
instructing said motor to output positive torque is generated when said
down-converter (12) fails, and
 in said second step, the torque of said motor is controlled to a positive
10 value based on the command generated in said first step.